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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,817	12/11/2003	Koji Ishizaki	DAIN : 758	5883
25944	7590	08/24/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			QI, ZHI QIANG	
			ART UNIT	PAPER NUMBER
			2871	
DATE MAILED: 08/24/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/732,817	Applicant(s) ISHIZAKI, KOJI	
	Examiner Mike Qi	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of June 30, 2005 is acknowledged. The traversal is on the ground(s) that applicant request reconsideration and withdrawal of the restriction requirement. This is not found persuasive because claims 1-11 and claims 12-19 are related as process of making and product made, and the product as claimed can be made by another and materially different process such as using the radiations or other process, and the claims 1-11 contain distinct species, and that would need different searches.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-11 has been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 30, 2005.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12, 14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,926,241 (Gunning, III) in view of US 5,818,615 (Abileah et al).

Regarding claims 12, 14, 16 and 18, Gunning discloses (col.5, line 15 – col.6,

Art Unit: 2871

line 65;Fig.3) that a process for fabricating a photo-patterned compensator, i.e., a process of producing a retardation element for use in a display element having pixels comprising:

- forming a liquid crystal layer by a polymerizable liquid crystalline material on a substrate having aligning power (such as deposit polymerizable liquid crystal onto the alignment layer);
- first radiation with organic solvent to cure the liquid crystal (such as step 325. illuminating the polymerizable liquid crystal material with ultraviolet radiation into contact with solvent such as cyclohexanone ,i.e.,organic solvent)
- second radiation to cure the film (such as step 335 illuminating the film with ultraviolet radiation);
- the temperature typically between 80°C to 100°C (higher than room temperature).

Gunning does not explicitly discloses that using radiation by varying the quantity of the radiation to create fine areas in the polymerizable liquid crystal layer having different retardation values corresponding to the three colored subpixels.

Abileah discloses (col.18, line 28 – col.20, line 4; Fig.11) that patterned retardation films (208, 210, 212) having different retardation values and corresponding to the three colored subpixels (blue, green, red). Abileah further discloses (col.24, lines 14-22) that the retardation values of each retardation film of the respective subpixels is varied by varying the thickness thereof to create different retardation values.

Art Unit: 2871

As a generally available knowledge, using radiation would achieve actinic effect to control the thickness of the polymerizable liquid crystal layer so that varying the quantity of the radiation would create the fine areas corresponding to the three colored subpixels.

Abileah further indicates (col.26, lines 14-38) that such patterned retardation films according to colors improves the contrast ratio of each color and prevents excess leakage of one color relative to other colors at particular viewing angles.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to modify the photo-patterning compensator process of Gunning with the teachings of patterning the retardation films according to colored subpixels as taught by Abileah in order to achieve superior contrast ratio for a plurality of wavelength, since the phase shift of the liquid crystal layer is substantially matched to the wavelength of each particular color by use such retardation films (see col.23, line 66 – col.24, line 13).

5. Claims 13, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunning and Abileah as applied to claims 12, 14, 16 and 18 above, and further in view of US 2002/0041352 A1 (Kuzuhara et al).

Regarding claims 13 and 17, Gunning and Abileah teach the invention set forth above. Gunning and Abileah lack that the radiation is applied to the liquid crystal layer in an atmosphere of nitrogen.

Art Unit: 2871

Kuzuhara discloses (paragraph 0379) that it is preferable to radiate the actinic rays in the nitrogen circumstances to avoid delaying polymerization reaction so as to reduce reaction time for effective hardening.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to modify the photo-patterning compensator process of Gunning and Abileah with the teachings of radiating the actinic rays in nitrogen atmosphere as taught by Kuzuhara for achieving effective hardening, since the reacting time is reduced (see paragraph 0379).

Regarding claims 15 and 19, Gunning discloses (col.6, lines 14-53) that the temperature for the illuminating and the heating is adjusted to 90°C that is higher than the room temperature.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (571) 272-2299.


The examiner can normally be reached on M-T 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Qi
Patent Examiner


ROBERT KIM
SUPERVISORY PATENT EXAMINER